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137 322 313 372 *The birches of Kamtſchatka* are much fuller of knots and hard excreſcences than thoſe of *Europe*; but of theſe knots they make very uſeful plates, ſpoons, and cups. Mr. *Steller* obſerved, that the white poplar near the ſea was quite porous and light, which he attributed to the ſalt water; that the aſhes of this wood, laid out in the open air, turned into a ſtony ſubſtance heavy and hard, which, the longer it lies, the harder and heavier it grows. This ſtone, when broken, ſhews ſome ſpecks of iron in its ſubſtance. Sallows * and alders † are the common fire-wood in *Kamtſchatka*. The bark of the ſallow is uſed for food, and that of the alder in dying their leather; as ſhall be related more at large in another place. They have the tree tcheremough‖ and the hawthorn ‡ of two ſpecies, one yielding a red, and the other a black fruit; of theſe they lay up a great quantity againſt winter: they have likewiſe the ſervice-tree ** in great plenty, whoſe fruit is eſteemed amongſt their moſt delicate confections.

137 262 Their principal nouriſhment is from the nuts of the ſlantza, which grows every where, both in hills and dales. This ſhrub, or tree, is truly of the cedar kind, only it is much leſs; and inſtead of growing ſtraight, it creeps along the ground. Its cones and nuts are not half ſo large as thoſe of the cedar: the *Kamtſchadales* eat them with the ſhells. Theſe, as well as the tcheremough and the hawthorn berries, are very aſtringent, eſpecially if eaten in any quantity. The greateſt virtue of theſe nuts is, that they are a good remedy againſt the ſcurvy, as all our ſeamen can witneſs: for in the moſt ſevere ſcurvy this is, as one may ſay, almoſt their only medicine; and from the tops of the ſlantza and cedar was their common drink made, ſometimes fermented, at other times drunk warm like tea; and orders were given by

* Salices.
† Alni.
‖ Padus foliis annuis. LINN.
‡ Oxyanthus fructu rubro et nigro.
** Sorbus.

the

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the commanding officer that the kettle with ſlantza and cedar tops ſhould never be taken from the fire. Red currants, raſberries, and kneſhnitza are very rare there, or grow at ſuch a diſtance from their houſes that no one cares to go in ſearch of them. The blackberries of the gimoloſt * are of great uſe, being of an agreeable taſte, ſomething like new-fermented beer. The bark of this ſhrub is uſeful in diſtilling brandy, giving ſtrength and ſharpneſs to the ſpirit.

The juniper † grows every where; but they do not uſe the berries, as they lay up great ſtore of moroſky ‖, pianitza ‡, bruſhnitza **, klioukva ††, and vodinitza ‖‖: and when they have great plenty of theſe berries they not only uſe them as confects, but diſtil brandy from them, except from klioukva and vodinitza, which yield no ſpirit. Mr. *Steller* writes, that the vodinitza is no bad remedy for the ſcurvy; and the inhabitants dye any old cloaths with it that have loſt a colour, to which it gives a cherry-colour. Some boil it up with train-oil and alum, and dye the beaver and coarſe ſables with it well enough to deceive the unwary or ignorant. In many places they content themſelves with roots and herbs, and make them ſupply not only their want of bread, but of fiſh alſo. The principal of theſe is the ſaranne, which ſerves inſtead of groats. It belongs to the claſs of the lillies ‡‡; but as this ſort is never ſeen any where but in *Ochotſkoy* and *Kamtſchatka*, I ſhall give a deſcription of it. It grows about half a foot high; has a ſtalk near the thickneſs of a ſwan's quill, red below and green above. Its leaves grow in two

* Lonicera pedunculis biflorio, floribus infundibuli formis, bacca ſolitaria, oblonga, anguloſa. GMEL. flor. Sib.
† Juniperus.
‖ Chamemorus RAII Syn.
‡ Vaccinium Spec. 2. LINN. Bilberry.
** Vaccinium Bilberry Spec. 3. LINN.
†† Vaccinium Red Crowberry Spec. 4.
‖‖ Empetrum.
‡‡ Lillium flore atro rubente.

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137 rows upon the ſtalk; the lower row having three leaves, and the upper four, placed croſsways: the form of the leaves is oval. Sometimes above the ſecond row one leaf grows juſt under the flower. Upon the uppermoſt part of the ſtalk grows one dark cherry-coloured flower, rarely two, ſomething leſs than that of the common lilly; and this is divided into ſix equal parts. The pointal in the center of the flower is triangular, at the top flat, and in three different cells contains flat reddiſh ſeeds. Round the pointal are ſix white ſtamina with yellow heads. Its root, which is properly the ſaranne, is about the bigneſs of a root of garlick, made up of many little cloves, whence it acquires a round form. It bloſſoms in *June*, at which time one can ſee no other flower over the whole fields.

222 252 262 435 The natives of *Kamtſchatka*, and the wives of the *Ruſſian* Coſſacks, dig up the roots in the harveſt, or take them out of the neſts of the field-n[illegible]y† them in the ſun, and ſell them for five or ſix rubles the pood. The ſaranne half boiled, and beat up with brambleberries, cranberries, or ſuch other of this kind, makes one of the moſt agreeable confections, being of a ſharp ſweetneſs; and if one had enough for every day's uſe, the want of bread would be tolerably 137 well ſupplied. Mr. *Steller* reckons five ſpecies of this plant: 1ſt. the kimtchiga, which grows near *Tegbil* and *Hariouſkovoy*, in appearance like a large ſugar-pea, and if boiled taſtes much the ſame; but neither he nor I ever ſaw this plant in bloſſom: 2dly, the round ſaranne, which I have deſcribed above: 3dly, ovſenka *, which grows every where in *Siberia*, being roots of red lillies, whoſe flowers are all turned up in curls; the bulb is compoſed of an infinite number of ſmall cloves: 4thly, titichpa,

* Lilium radice tunicata, foliis ſparſis, floribus reflexis, corollis revolutis. GMEL. flor. Sib.

† Defect in Original. Sentence probably reads: "field-mice to dry."

which

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is only the richer ſort of people that uſe this brandy; and what they ſell is only the firſt running, which makes a very good dram.

Two pood of herbs[1] generally render one vedro * of the firſt running, and the pood coſts four rubles or more. The herbs that remain in the ſtill after drawing off all the ſpirit, are made uſe of as a yeſt, inſtead of berries, to ferment other infuſions or wort; and what they cannot uſe thus the cattle eat very greedily, and it fattens them much. It is remarkable that brandy diſtilled from the plants from which the ſkin has not been clean ſcraped, it cauſes melancholy and perturbation of mind. Mr *Steller* made the following remarks upon this brandy: 1ſt, that it is very piercing, and contains a good deal of a ſharp acid, which coagulates the blood and makes it black: 2dly, that a ſmall quantity of it makes people drunk and quite ſenſeleſs, and cauſes their faces to turn black: 3dly, that if a perſon drinks a few drams of it, he is plagued the whole night with diſagreeable dreams, and next day is uneaſy and diſturbed as if terrified with the apprehenſion of the greateſt misfortune: and, what is very extraordinary, he has ſeen ſome people the day after they have been drunk with this ſpirit, from one draught of cold water, become again ſo drunk that they could not ſtand upon their feet. They wet their hair with the juice, which they ſqueeze out of this herb in the ſpring, as a preſervative againſt lice, and find it to be their only relief. Many of the *Kamtſchadales*, who deſire to have children, will not eat this herb, green or dry, imagining that it impairs the generative faculties.

The herb kipri†, which grows in all *Europe* and *Aſia*, has the third place in the food of the *Kamtſchadales*. They

* Vedro is a *Ruſſian* liquid meaſure containing 25 pints.

† Epilobium. Linn. Succ. Spec. 1. French willows.

1. [the sweet herb, sphondylium foliis pinnatifidis Linn. Cliff.

boil

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boil it with their fiſh, and uſe the leaves as tea; but the greateſt uſe is made of its pith, which, after having ſplit the ſtalks, they ſcrape out with ſhells, and, tied up in bundles, dry it in the ſun. It is then very pleaſant, and in taſte reſembles dried *Perſian* cucumbers. The *Kamtſchadales* uſe it in ſeveral diſhes, and ſerve it up green as a deſert. The kipri boiled gives a thick ſweet wort, that makes the beſt quaſſe * imaginable: it alſo affords them a very ſtrong vinegar, if to ſix pounds of the kipri they add a pound of the ſweet herb of ſphondilium, and ferment it in the uſual way: they get a great deal more brandy, when they uſe the infuſion of the kipri, inſtead of water, to prepare the ſweet herb for diſtillation.

They cure the navels of their children with this herb, chewing it, and laying it upon the part. They grind the roots and ſtalks, and uſe them inſtead of green tea, to which the flavour has ſome reſemblance. The ſame uſe the *Kuriles* make of another ſhrub †, which has flowers like the ſtrawberry, only yellow, and produces no berries. This is called *Kuriſkoy* tea, and has great virtue in fluxes and gripes.

The wild garlick ‖ is not only uſeful in the kitchen, but alſo in medicine. Both the *Ruſſians* and *Kamtſchadales* gather great quantities, which they cut and dry in the ſun for their winter proviſion; at which time boiling it in water they ferment it a little, and uſe it as an herb ſoup, which they call *ſhami*. They eſteem the wild garlick ſo efficacious a remedy againſt the ſcurvy, that they think themſelves in no danger ſo ſoon as it begins to

* Quaſſe is a *Ruſſian* drink made of rye-malt, and flower, and very little fermented. Sometimes they add mint to it, and it makes no diſagreeable drink.

† Potentilla caule fruticoſo. LINN. Cliff.

‖ Allium foliis radicalibus petiolatis floribus umbellatis. GMEL. flor. Sib. tom. 1. p. 49.

ſhew

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ſhew itſelf under the ſnow: and I have heard an extraordinary account of its virtues from the Coſſacks that were employed with captain *Spanberg* in building the ſloop Gabriel: they were ſo ill with the ſcurvy, that ſcarce any were able to work, or even to walk, ſo long as the ground was covered with ſnow; but as ſoon as the high lands began to appear green, and the wild garlick to ſprout out, the Coſſacks fed upon it greedily. Upon their firſt eating it, they were covered over with ſcabs in ſuch a manner, that the captain believed they were all infected with the venereal diſeaſe. In about a fortnight, theſe ſcabs fell off, and they were perfectly recovered of the ſcurvy.

We muſt reckon amongſt the food of the *Kamtſchadales* the ſhelmina *, and the morkovai †, which is the ſtalk of a plant that is hollow and juicy, ſuch as the angelica. The ſhelmina is a ſpecies of the ulmaria. Its root is blackiſh without, and white within: it ſends out from one root two or three ſtalks about a man's height; which, near the root, are about a finger thick, but above, ſomewhat thinner. The leaves ſhoot out from long branches which grow all over the ſtalk. Their upper part is green and ſmooth; and their lower rough, with high reddiſh veins. Where the branch ſprings from the root there are two leaves like thoſe above deſcribed, but ſomewhat leſs. The ſtalk is triangular, reddiſh, hard, and rough. At the top of the plant is a flower reſembling that of the ſervice-tree. It has four oval piſtils, flattened in the ſides, with downy edges; in each of which are contained two longiſh ſeeds. They are ſurrounded by ten white ſtamina, riſing above the flower; the anthera being likewiſe white. It flowers about the middle of *July*, and the ſeeds are ripe about the middle of *Auguſt*. The root, ſtalks, and

* Ulmaria fructibus hiſpidis. STELLER. † Chærophyllum ſeminibus levibus nitidis, petiolis ramiferis ſimplicibus. LINN. Cliff. p. 101.

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137 leaves of this plant are very aſtringent: both the *Ruſſians* and
252 *Kamtſchadales* eat it in the ſpring. They preſerve the root[1] for
262 winter, which they ſtamp and boil for a gruel. It has ſome re-
— ſemblance in taſte to the Piſtacho nut.

The morkovai pouſhki, or carrot bunches, are ſo called becauſe they are like carrots in their leaf as well as in taſte. They likewiſe eat this green in the ſpring, but they oftener ſour it like ſour crout, or make a liquor with it.

137 The kotkonia * grows upon the banks of the rivers of *Kamtſchatka* in great plenty. Its root is about the thickneſs of one's finger, bitter and aſtringent, black without, and white within. Sometimes five, but always more than two ſtalks ariſe from this root, about ten inches high, of the thickneſs of a gooſe-quill, and of a yellowiſh-green colour. At the top are three oval leaves ſpread like a ſtar, from the middle of which riſes a ſtalk half an inch high, which ſupports the flower. The cup of the flower conſiſts of three oblong green leaves, and the flower itſelf of as many white ones. In the middle of the flower is the piſtil, of ſix ſides, a yellow colour, with a red top: it contains three cells, and is ſurrounded with ſix equal yellow-coloured ſtamina; the anthera is alſo yellow. When the piſtil is ripe it is as big as a walnut, is ſoft, fleſhy, and of an agreeable taſte, like a pleaſant apple. It flowers about
262 the middle of *May*. The *Kamtſchadales* eat the root of this plant both freſh and dried, with caviar; but the fruit muſt be eaten as ſoon as gathered, for it is ſo delicate that it ſpoils if it be kept one night.

137 The ikoume ‡, or biſtort, grows in plenty both on the hills and
262 in the vallies. The *Kamtſchadales* eat it freſh or dried, and

* Tradeſcantia fructu molli eduli.

‡ Biſtorta foliis ovatis oblongis acuminatis. LINN. Cliff.

1. [Shelmina, Umaria fructibus hispidis. pounded Steller]

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pounded with caviar. It is far from being ſo aſtringent as that in *Europe*, is juicy, and taſtes like a nut.

Utchichlcy † is a plant that has leaves like hemp, but flowers like the ragwort. When the leaves are dried, and boiled with fiſh, they make the broth taſte as if the fleſh of the wild goat was boiled in it.

The root called here mitoui, and at *Jakutſki* ſardan, they fry in the fat of fiſh, or ſeals, and eſteem it a delicate diſh.

Theſe are the principal plants which they make uſe of in their kitchens; however there is a great number of others, and alſo of plants thrown out by the ſea, which the *Kamtſchadales* eat both freſh and dry in the winter: for, as Mr. *Steller* obſerves, they refuſe nothing, but eat every thing they can get down, even the drieſt plants and naſtieſt rotten muſhroons, although one would imagine the conſequence dangerous, as indeed it ſometimes happens. However, he tells us the natives have obtained ſuch a knowledge of plants, and of their uſe both in food and medicine, that he is ſurpriſed; and that one ſhall not find ſo much knowledge of this ſort among any barbarous nation, nor even, perhaps, amongſt the moſt civilized. They give a name to every one of their plants, and know all their properties, and the different degrees of virtue which they derive from the various ſoils and expoſitions in which they grow; and ſo accurate are they in theſe diſtinctions, and alſo in the proper time of gathering the ſeveral fruits and other produce, that it is truly wonderful. Hence the *Kamtſchadales* have this advantage above other people, that they can find food and medicine every where; and, by their knowledge and experience, are in little danger from the noxious plants.

† Jacobea foliis cannabis. STELLER.

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exquiſite pain that the bear can make no further reſiſtance, and allows the hunter to lead him wherever he pleaſes, or ſtab him with his knife, without any danger.

The *Kamtſchadales*, however, look upon it as an affair of ſuch conſequence to kill a bear, that whoever has this honour, is obliged to feaſt all his neighbours; at which entertainment the bear's fleſh is the principal diſh; and, as a trophy, the bones of the head and thighs are hung round about their huts.

Of the bears' ſkins they make their beds and coverings, caps, gloves, and collars for their dogs. The fleſh and fat are their moſt delicate food; and the fat, when melted, is thin, and might be very well uſed with ſallad. With the guts they cover their faces in ſummer to keep off the ſun: ſometimes they uſe their ſkins as ſhoe-ſoles, to prevent them from ſliding upon the ice; and with their ſhoulder-blade bones, made ſharp, they cut graſs.

From the month of *June* to the end of harveſt the bears are very fat; but in the ſpring they are lean and dry. In the ſtomachs of thoſe killed in the ſpring nothing is found but a frothy ſlime: whence the inhabitants maintain the general opinion, that the bear has no food throughout the whole winter, but ſupports himſelf by ſucking his paws.

Although, as has been related above, wolves abound in *Kamtſchatka*, and their furrs are in great eſteem for cloaths, yet few are caught there. They differ in nothing from the wolves that are found in other places. By their cunning and fierceneſs they do more hurt to the inhabitants than their furrs bring profit; for they kill not only the wild deer, but even herds of the tame, notwithſtanding the latter have always a watch. Their favourite morſels ſeem to be the tongues of the deer, or even of the whales that are thrown upon the ſhore: they ſometimes ſteal the hares and foxes out of the traps and ſnares. White

wolves

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136 wolves are very ſeldom ſeen here, and therefore they are much
262 more eſteemed than the grey. Although the *Kamtſchadales*
237 are called univerſal eaters, yet they never eat the fleſh of either wolves or foxes. The deer and ſtone rams may be reckoned among the moſt uſeful of all the animals in *Kamtſchatka*, becauſe their ſkins are moſt uſed in cloathing. The inhabitants, however, kill but few in proportion to the great numbers that are in
136 this country. The deer live in moſſy places, and the wild rams
224 upon the higheſt mountains; ſo that the hunters of the wild rams
237 leave their dwellings in the beginning of harveſt, and taking all their families with them go to the hills, where they are employed in this chaſe until the month of *December*. The wild rams reſemble goats, but their hair is like the deers'. They have two horns that are twiſted round like the *Ordinſky* rams, but much larger. The horns of thoſe that are of full age weigh each of them from 25 to 30 pounds. They run very ſwiftly, throwing their horns back upon their ſhoulders; ſpring over rocks, and run upon the narrow ledges of the moſt dangerous precipices. Cloaths made of their ſkins are very warm. The fat upon their haunches is equal to that of the deer, and the fleſh is a moſt delicious food. Of the horns they make ladles, ſpoons, and other ſmall utenſils; and the horn entire they carry upon the road at their girdles, and uſe it for a bottle.

136 There are three kinds of rats; the firſt of which is of a brown colour, as large as the greateſt houſe-rats in *Europe*: but their cry is very different, reſembling the ſqueaking of pigs; otherwiſe they are very like our common rats. Of the ſecond kind there are but few, and theſe in the houſes, where they run about without fear, and live upon any offals. The third ſort have a diſpoſition ſomewhat like the drones among bees, laying up no manner of proviſion, but ſtealing their food from the firſt kind, which live in the fields, woods, and high mountains, in great numbers.

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237 thoſe made of timber, in that they are much lighter and go
262 ſwifter. Of the ſeals' fat both *Ruſſians* and *Kamtſchadales* make
— candles; and beſides the natives eſteem it ſuch a delicacy that
251 they can have no feaſt without it. The fleſh they boil or dry in the ſun; but if there are great quantities, they ſmoke or bake it in the following manner: They dig a large pit in proportion to the quantity of fleſh or fat, and pave the bottom with ſtones. Then they fill it with wood and light it below, continuing to add fuel until it be as hot as any oven. After which they take out all the aſhes, then lay at the bottom a layer of green poplar wood, upon this another of ſeals' fleſh or fat, each ſeparately; and thus alternately wood and fleſh until the pit be quite full. They then cover it with graſs and earth, to keep in the heat; and after ſome hours they uncover it, take out the fat and fleſh, and lay it up for the winter. Both fleſh and fat thus prepared is much more delicate than what is boiled; beſides, it keeps without ſpoiling for a whole year.

825 When they have picked all the fleſh from the heads of the
796 ſeals they ſhew them all the reſpect that they would to a particular friend that viſits them. I ſaw this ceremony in the
782 year 1740 at the little fort of *Krodakigbe*, which ſtands upon a river of the ſame name that falls into the Eaſtern Ocean. It was performed in the following manner: They brought in the ſkull or head of a ſeal, bound round with the ſweet graſs, and placed it upon the floor. Then a *Kamtſchadale* entered with a bag filled with the ſweet herbs and others, particularly a good deal of birch bark, and placed it near the head; upon which two other *Kamtſchadales* rolled in a great ſtone, and ſet it oppoſite to the entry of the hut, about which they laid ſeveral ſtones; and two others tore the ſweet herb, and made it into ſmall bunches. The great ſtone was to ſignify the ſea, the ſmaller the waves, and the bunches of the ſweet herb the ſeals. This being done, they took three diſhes of caviar mixed with kipre, hurtleberries, and ſeals'

fat

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225 Mr. *Steller* writes that he was certainly informed, that in the bodies of whales thrown upon the coaſt of *Kamtſchatka*, there have been found harpoons marked with *Latin* letters; but by what means he could be certain of this, I know not; for the natives have no idea of letters; and before our arrival, none of our Coſſacks ever ſaw a *Latin* letter.

237 262 Many are the advantages which the *Kamtſchadales* derive from this plenty of whales: of the ſkin they make ſhoe ſoles and ſtraps; they eat the fleſh, as likewiſe the fat which they alſo burn; they ſew their boats with the beard, of which alſo they make nets for foxes and fiſh; out of the lower jaw they form a ſort of ſledge, and make knife-handles, rings, and ſeveral ſmall things of it beſides; the inteſtines ſerve for barrels, and other veſſels; out of the nerves and blood-veſſels they make ropes; and of the vertebræ, ſeats. The moſt delicate pieces of the whale are the tongue and fins. I thought that the whale's fat with grout was not unpleaſant, but I can't ſay, that I was then a proper judge, for hunger makes every thing agreeable.

226 136 825 They never go a fiſhing for the kaſatki, but if this fiſh is thrown on ſhore they uſe its fat like that of the whale. Mr. *Steller* ſays, that, in the year 1742, eight of them were thrown on ſhore at once, near the *Lopatka*; but the diſtance and the bad weather prevented his going to examine them. He was told, that the largeſt never exceed four fathoms in length; that they have ſmall eyes, a wide mouth, and great ſharp teeth, with which they wound the whale; but that they tear up the belly of the whale with a ſharp fin which is upon their backs, is a falſe report; for though this fin is about five feet long, very ſharp, and in the ſea ſtands quite upright, yet it is altogether ſoft, and conſiſts only of fat: nay the animal itſelf is almoſt all fat having hardly any muſcular fleſh.

There

l: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

There is likewiſe another creature in theſe ſeas reſembling a whale, but ſmaller and ſlenderer: the *Ruſſians* call it a wolf, and the *Kamtſchadales*, chethak. Its fat is of ſuch a nature, that, when ſwallowed, it preſently paſſes inſenſibly. The natives ſometimes uſe it as a medicine in caſe of coſtiveneſs, but oftener to play tricks with one another. They feed upon the fleſh and tongue, which have not the ſame quality.

Notwithſtanding the great plenty of whales upon this coaſt, the ſcarcity of food is ſometimes ſo great, that whole villages die of hunger. In the month of *April*, 1739, I ſaw a melancholy inſtance of their being obliged, out of neceſſity, to eat ſome poiſonous whale's fat, at a village upon the river *Beroſover*, called *Alaune*, where I obſerved the people all look pale, as if they had been ſick for a long time; when I aſked the reaſon, I was told, that juſt before my arrival one of the natives was killed by eating of whale's fat; and as all the reſt had eat of the ſame, they dreaded the ſame fate. In about half an hour, a young healthy man began to groan and complain that his throat burnt; upon which the old women, who are the phyſicians there, faſtened him with ropes to a ladder, and placed themſelves on both ſides of him with great clubs in their hands, with which they toſſed firebrands out of the huts, and the wife of the ſick perſon coming behind him, made ſeveral conjurations over his head, begging death to ſpare him: however he died the next day; but the other inhabitants, as I heard, recovered with difficulty after a long time. This accident did not greatly ſurpriſe me; I rather wondered that ſuch things did not happen oftener, eſpecially from thoſe whales which are killed with poiſoned darts. However the *Kamtſchadales* think ſo little of the conſequences, that they had rather riſk their lives than be deprived of the pleaſure of eating whale's fat.

After the whales, we muſt mention the fiſh * mokoe, which at *Archangel* is called akula. It is about three fathoms long;

* Canis Carcharias Autoris.

brings

l: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

136 brings forth its young alive, like the whale; and when its mouth is ſhut has ſome reſemblance of a ſturgeon, but its teeth are very different, being large and terrible. The *Kamtſchadales* eat the fleſh of this fiſh, and though it appears to be tough and ſtrong, they ſay it is exceedingly well taſted. The guts, and particularly the bladder, are in high eſteem; ſo that when they catch this fiſh, they never call it by its name, for fear, as they imagine, they ſhould provoke it to burſt its bladder, and render it uſeleſs to them. The teeth are ſold under the name of ſerpents' teeth.

136 Several fiſhes which are common to other ſeas are found here; as pike, eels, lampreys, cod, and very fine ſoals in great plenty; but the inhabitants make no account of theſe fiſh, and never uſe them unleſs in great neceſſity, or to feed their dogs. Mr. *Steller* obſerved four different ſpecies of flat fiſh.

There is a fiſh called * vahnae, which is a ſpecies of the cod; is round and thick, with three fins upon its back; and when taken out of the water is of a copper-colour, but preſently changes to yellow: its fleſh is white, but ſoft, and of a diſagreeable taſte; however the inhabitants eat more of it, than of other fiſh which are much better taſted; the reaſon indeed is, that they catch this fiſh in the beginning of the ſpring, when they can catch no other; a great deal of which they dry in the ſun uncleaned, deſigning it as proviſion for their dogs.

136 I ſaw the fiſh which they call † terpuk, but it being dry, I could not obſerve thoſe fine colours which Mr. *Steller* deſcribes. By his deſcription its back is blackiſh, its ſides are reddiſh, and chequered with fine ſilver-coloured ſpots; ſome of which are ſquare, and others circular: in its ſhape it reſembles the perch.

1. [Mokoe or Canis Carcharius Autorum]

* Onos vel Aſinus Antiquorum.
† Dorcogrammos Stelleri.

They

l: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

They angle for this fiſh near the *Kuriſſki* iſlands, and the haven of *Awatſcha*, with hooks made of bone or wood. 136

There are likewiſe ſeveral other kinds of fiſhes in theſe ſeas which are not very common in other places; but as they make no part of their nouriſhment, and are ſeldom caught, I ſhall take no notice of them, my deſign being only to mention ſuch as ſerve for food to the inhabitants, in this country which produces no grain. The chief of theſe are ſalmon of different kinds, which during the ſummer come in ſhoals from the ſea up the rivers. Of theſe they make what they call *eukol*, which they uſe inſtead of bread; and they boil up the fat, which ſerves for butter. They likewiſe make glue of them. 136 262 237

Before I give a particular deſcription of each ſpecies apart, I would communicate ſome obſervations which regard the catching of theſe fiſh, and which indeed are wonderful proofs of the Divine Providence and the goodneſs of the Creator, who has bleſt a place with ſuch abundance of fiſh where there is neither cattle nor grain. 136

In *Kamtſchatka* the fiſh come from the ſea in ſuch numbers, that they ſtop the courſe of the rivers, and cauſe them to overflow the banks; and when the waters fall there remains a ſurpriſing quantity of dead fiſh upon the ſhore, which produces an intolerable ſtink. At this time the bears and dogs catch more fiſh with their paws than people do at other places with their nets. All the fiſh that ſwim up the rivers are of the ſalmon kind, and are commonly called red fiſh; but the ſeveral ſorts are ſo diſtinct from each other, that *Kamtſchatka* alone is thought to produce as many different ſpecies as are to be found in all the world beſides. Not one fiſh remains in *Kamtſchatka* longer than ſix months (except gudgeons); for all that are not caught before the end of *December* die, except in ſome few deep places where there are warm ſprings. It is obſerved of all the different ſpecies of

1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

The different ſpecies of thoſe fiſhes which are here called red fiſh ſhall be mentioned in giving an account of the time when they come out of the ſea into the rivers; it being remarked that they always obſerve the ſame order, the ſame ſpecies which comes out firſt one year continuing to do ſo the following. This the *Kamtſchadales* find to be ſo certain, that they call their months by the name of the fiſh which are then caught.

The largeſt and beſt of theſe fiſh, and which come firſt out of the ſea, are called chavitſi. It reſembles the common ſalmon, though it is a great deal broader; is about three feet and a half long, and weighs a pood and a half; its breadth is about the fourth part of its length; its noſe is ſharp, the upper jaw being longer than the lower; its tail is equal; the back is bluiſh, with ſome ſmall black ſpots; its ſides are of a ſilver colour, and its belly white; its gills are long and ſmall; and its fleſh is red both raw and boiled.

They ſwim up the rivers with ſuch force that the water ſeems to riſe like a wall before them; which the *Kamtſchadales* obſerving get into their boats, and throw out their nets. This fiſh does not come up in ſuch large ſhoals as the others, nor is ſuch plenty caught as to make *eukol* of it, except upon the river *Kamtſchatka*; and even there it is ſo rare that it is only uſed on feaſts or holydays, and after all it is ſo fat that it preſently turns bitter. The Coſſacks, for the moſt part, ſalt it, particularly the belly, back, and head. The ribs are dry and hard, but the belly is truly a delicate food, at leaſt no fiſh there comes up to it; and what they dry in the ſun, if not better than the *Jakutſki* ſturgeon, is at leaſt not worſe.

Of all the rivers that run into the Eaſtern Ocean this fiſh is only found in the river *Kamtſchatka* and the bay of *Awatſcha*; and of thoſe that fall into the *Penſchinſka* ſea, only in the *Bolſcheretſkoi* river: beſides, Mr. *Steller* ſays, that none is to be found further north than 54°, and it is certain that it is not

1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

136 to be found near *Ochotſka*, where it is eſteemed a valuable preſent.

226 262 376 574 The nets with which this fiſh[1] is caught are made of yarn about the thickneſs of ſugar ropes; and the fiſhing begins about the middle of *May*, and laſts ſix weeks. The *Kamtſchadales* eſteem this fiſh ſo much, that the firſt they catch they bake and eat with great rejoicings. This cuſtom is very diſagreeable to the *Ruſſian* inhabitants who hire the natives to fiſh for them; for however impatient the maſter may be to taſte the new fiſh, the fiſhermen will have the firſt, looking upon it as a great ſin if they do not eat it themſelves, and with all due ceremonies.

136 The ſecond kind is only called red fiſh, in *Ochotſka*, narka. It is about 21 inches long, and flattiſh; its fleſh is extremely red; its head very ſmall; the ſnout ſhort and ſharp; the tongue bluiſh, with whitiſh ſides; its back bluiſh, with black ſpots; its belly white; and its tail forked. Its breadth is about a fifth part of its length; and it has ſcales large and round, eaſily ſeparating from the ſkin: it weighs about fifteen pounds. It is found in every river that runs either into the *Penſchinſka* or Eaſtern Sea, coming up in great ſhoals; and it is caught about 136 the middle of *June*. The *eukol* that is made of it, though very 226 pleaſant, preſently turns bitter; ſo that for the moſt part they either ſalt this fiſh, or boil it for its fat. There are two things worth notice concerning it: the firſt of which is, that part go before to the heads of the rivers, as if they were ſent out to examine them, where ſome of them are caught before the ſhoals appear at the mouths. The ſecond is, that this fiſh is more plenty in ſuch rivers as run out of lakes than others: nor does it live long in the former, but haſtens directly into the latter; in the depths of which it lies 'till the beginning of *Auguſt*, at which time it comes nearer the ſhore, and tries to get into theſe rivers that communicate with the lakes. Here the inhabitants catch them by nets, dams, or other methods.

1. [chivatsi]

The

The third kind of this fiſh is called keta or kaeko; which is 136
ſomewhat larger than the narka. The fleſh is white; the head 262
flattiſh and longiſh; the ſnout is bent; the teeth, when it has
been ſome time in the river, are like a dog's; its tongue is ſharp;
its tail a little forked; its back black and green; its ſides and
belly like other fiſh; and its ſkin is without ſpots. The *eukol*
that is made of this fiſh they call their houſehold bread, being
much more plenty than any other; as the ſeaſon of the fiſhery,
which begins in *July* and ends about the middle of *October*, is
drier and more proper for preparing it. This fiſh is caught in
all the rivers both in the *Penſchinſka* and Eaſtern ſeas.

The gorbuſhe, or crook back, follows or ſometimes accompanies 136
the keta. This fiſh is more plentiful than any other whatever; 262
it is about eighteen inches long, and flattiſh; its fleſh is white; 231
its head ſmall; its ſnout ſharp, and conſiderably crooked; its teeth
ſmall; its back bluiſh, with round black ſpots; its ſides and belly
like the other ſorts; and the tail forked. Though this fiſh is
not bad, yet the inhabitants have ſuch plenty of what they eſteem
better, that they uſe this only for their dogs.

The laſt of theſe kinds that come on ſhore is called white fiſh. 136
This fiſh both in bulk and appearance is very like the keta; they 825
differ in this indeed, that the keta has no ſpots, and the white 226
fiſh has long black ſpots upon its back. It excels in taſte all the
fiſhes that have white fleſh; and it agrees with the narka in this,
that it moſt frequently haunts thoſe rivers that run out of the
lakes, and is caught there in the ſame manner. The young ones,
which accompany the old to take care of the roes and convoy the
young fry down, are eſteemed by the inhabitants to be a different
ſpecies, and are called milktchuch. So ſoon as the old ones have 136
ſpawned, they take all care to provide for their own ſafety, re- 226
tiring immediately to deep places where there are warm ſprings;
and they are chiefly found in the ſprings near the *Bolſcheretſkoi* river

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The fourth ſpecies is the harius, which is well known in *Siberia* and all *Ruſſia*; but thoſe that are here have the back fin longer than the others. Mr. *Steller* writes, that they come up into the rivers upon the firſt going off of the ice; but I never happened to ſee this fiſh in *Kamtſchatka*. 136

There is another ſpecies of red fiſh which reſembles the golſta, with this difference, that its head is larger, and the upper part of the ſnout a little hooked; its ſides are marked with red ſpots, like the malma: it is ſeldom longer than 20 inches.

Among the ſmall fiſhes which the *Kamtſchadales* feed upon are three ſpecies of ſmelts; one of which is called hagatch, the ſecond innaka, and the third uiki. The hagatch is our common ſmelt. The innaka differs from it a little, and is found in great plenty about the lake *Nerpech*. Uiki is thrown ſometimes upon the ſhore in vaſt heaps for 100 verſts together. They are eaſily diſtinguiſhed from the other ſpecies by a rough ſtripe that goes down the ſide. They commonly ſwim three together, and are ſo joined by the afore-mentioned rough ſtripe, that when you catch one the others cannot eaſily diſengage themſelves. The *Kamtſchadales* dry this fiſh as food for their dogs; but in caſe of ſcarcity they uſe it themſelves, although the taſte is very diſagreeable 136 231 262

The laſt kind of fiſh which we ſhall mention is the herring: theſe are found in great plenty in the Eaſtern Sea, but very ſeldom in the bays which lie upon the *Penſchinſka*. In my opinion they don't differ in the leaſt from the herring which we have in Europe; which Mr. *Steller* likewiſe confirms. In the harveſt they are found in large lakes, where they breed and winter: in the ſpring they ſwim towards the ſea. The greateſt fiſhery of them is in the lake *Viliutchin*, which is only about fifty fathom from the ſea, and has communication with it by a ſmall outlet. When theſe herrings enter the lake, this paſſage is ſhut up by the ſand being thrown into it, and remains ſo 'till the month of *March*, 136 226

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136 *March*, when it is washed away again by the high water arising
226 from the melting of the snow; which happens regularly every year. The herrings come every day to the mouth of the outlet, as if to inform themselves whether the passage was yet open, and remain there from morning 'till evening, when they return to the deeper part of the lake. The *Kamtschadales* observing this, break holes in the ice near the mouth of the outlet, where they put down their nets, and catch great quantities. This fishery continues so long as the ice remains upon the lake. They catch them likewise with nets in the summer, at the mouths of the rivers;
262 when they boil out the fat, which is as white as butter, and more
438 delicate than that of any other fish; and send it from the lower *Kamtschatkoy* fort (where the greatest quantity is made) as a rare present, to the other forts.

CHAP. X.

Of the BIRDS.

136 *KAMTSCHATKA* abounds in birds, but the in-
223 habitants make less use of them than of roots and fishes:
433 the reason of this is, that they don't well know how to catch them; and their fishery is so advantageous to them, that to leave that and go a bird-catching would be as ridiculous as for the husbandman to leave his plough and go a shooting.

136 I shall here divide the birds into three classes: the first, sea fowls; the second, the fresh-water fowls; and the third, those which frequent the woods and fields.

CLASS

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136 what leſs than the other two; its colour is like that of the ipatka, except that its bill and legs are black, and that there are two white ſprigs upon its forehead, which reach from the eye to the bill.

The aru *, or kara, belongs to this claſs. It is larger than a duck; the head, neck, and back are black; the bill long, ſtrait, black, and ſharp; the legs black with a caſt of red; it has three black toes, and is web-footed. Great numbers of 237 theſe are found upon the rocky iſlands; and the inhabitants kill 262 them for the ſake of their fleſh, though tough and bad taſted; but more ſo for their ſkins, of which, as well as thoſe of other ſea fowls, they make themſelves garments. Their eggs are reckoned a great delicacy.

136 There are two kinds of tchaiki, or cormorants, found upon this coaſt, which are hardly obſerved any where elſe. They are about the bigneſs of a gooſe, have a ſtrait reddiſh bill about five inches long, and ſharp on the edges, and four noſtrils, ſuch as other cormorants have, two being near the forehead as are found in other birds which are thought to prognoſticate ſtorms, and are thence named Procellaria; their heads are of the middling ſize; their eyes black; their tails eight inches long; and their legs are covered with hair to the knees, but below them are bare; they have three toes of a bluiſh colour, and are web-footed; their wings extend more than a fathom; they are ſometimes ſpeckled; they appear often near the ſhore, but can't ſtand ſtrait upon dry ground, their feet being ſo near the tail that they are not able to balance their bodies: they fly ſlow even when hungry, but when full of meat they cannot raiſe themſelves from the ground; and, having eat too much, they eaſe their ſtomachs by throwing it 237 up; they have a wide throat, and ſwallow fiſh whole; their fleſh is very tough and ſinewy, therefore the natives ſeldom eat it, but in great neceſſity, killing them principally for the ſake of their

* Lomvia Hoieri.

bladders,

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were black, and others white; but none of them came ſo near the veſſel as to be exactly obſerved. 136

The * kaiover, or kaior, a bird of this ſpecies, is black, with its bill and feet red; builds its neſt, which is very curious, upon high rocks in the ſea, and whiſtles very loud, for which reaſon the Coſſacks call it ivoſhik, or poſt-boy. I never ſaw this bird.

The fowl † urile, of which there is great plenty in *Kamtſchatka*, called, by writers, ſea ravens, is about the bigneſs of a common gooſe, with a long neck and ſmall head; the feathers upon the whole body are of a bluiſh black, except upon its thighs, where they are white and in tufts; there are alſo ſome long white feathers like hairs, here and there upon its neck; it has a red membrane or ſkin round the eyes, a ſtrait bill, black above and reddiſh below; and its feet are black and webbed: when it ſwims it holds up its head, but flying, it ſtretches it out like a crane; it flies ſwift, but riſes heavily; and feeds upon fiſh, which it ſwallows whole: in the night time, theſe fowls ſtand in rows upon the edges of the cliffs, from which in their ſleep they frequently fall into the water; where they are caught by the ſtone foxes, who watch for them; they breed in the month of *July*; their eggs are green, about the bigneſs of a hen's egg, and being boiled thicken a little, but are ill taſted; however the *Kamtſchadales* climb the higheſt rocks in ſearch of them, at the hazard of their lives. They catch them with nets, and in the evening with nooſes faſtened to a long pole; and theſe creatures are ſo void of apprehenſion, that, though they ſee the next fowl to themſelves taken away, they will ſit ſtill and receive the nooſe, 'till they are all taken off the cliff; their fleſh is hard and ſinewy; but the natives prepare it in 136 222 223 252 262

* Columba Groënlandica Batavorum. STELL.

† Corvus aquaticus maximus criſtatus periophtalmiis cinnabarinis, poſita candidis. STELL.

much.

1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

252 ſuch a manner that, as victuals are there, it is not bad; they
262 roaſt it in holes dug in the earth, without plucking off the feathers, or taking out the entrails, and when roaſted, they ſkin and eat it.

825 The natives ſay that theſe birds have no tongue; but this is not true, for they cry in the mornings and evenings: Mr. *Steller* compares their noiſe to the ſound of a trumpet.

136 CLASS II. *Of thoſe Birds which haunt for the moſt part about*
223 *the freſh Water.*

The firſt of this claſs is the ſwan, which is ſo common in *Kamtſchatka*, both in ſummer and winter, that the pooreſt perſon can have no entertainment without a ſwan. When they are moulting they hunt them with dogs, and kill them with clubs: in the winter they catch them in thoſe rivers that do not freeze.

136 Here are ſeven kinds of geeſe, which are diſtinguiſhed thus: large grey geeſe, gumenniki, ſhort necks, grey and ſpeckled, white necks, ſmall white geeſe, and foreign. They all come here in the month of *May*, and depart in the month of *October*, as Mr. *Steller* ſays; who likewiſe writes, that they come from *America*, and that he himſelf ſaw them paſs *Bering*'s iſland in great flocks, flying eaſt in the harveſt and weſt in the ſpring. In *Kamtſchatka* are principally found the large grey geeſe, the gumenniki, and the grey and ſpeckled; the ſmall white gooſe is hardly ever found here. Again, in the North Sea, about *Kolimi* and other rivers, are vaſt numbers of them; and the beſt down
223 is brought to *Jakutſki* from theſe places. They catch them at the time they caſt their feathers, in the following manner:— They build huts with two doors, near thoſe places where they moſt commonly ſit at night. The fowler putting a white ſhirt on, above his cloaths, ſteals as near the flock as he can; and ſhewing himſelf

1 [Urile, Corvus aquaticus maximus Cristatus periophtalmiis Cinnaberinis, postea Candidis. Stell.]

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Here are alſo found great numbers of ſmall birds, ſuch as plovers and ſnipes of different ſorts, which they catch with ſnares and gins.

CLASS III. *Of the* LAND FOWLS.

The chief of theſe birds is the eagle, of which there are four ſpecies in *Kamtſchatka*: the firſt is the black eagle, with a white head, tail, and feet. Theſe are rare upon the main land of *Kamtſchatka*; but, according to Mr. *Steller*, they are found in plenty on the iſlands between it and *America*. They make their neſts (which are near ſix feet in diameter, and about a foot thick) of ſhrubs upon high cliffs, and in the beginning of *July*, lay two eggs. The young ones are as white as ſnow: theſe he ſaw upon *Bering*'s iſland, but not without danger from the old ones, which, even when he did not the leaſt hurt to their young, attacked him with ſuch violence that he could ſcarce defend himſelf from them with his ſtick. The ſecond is the white eagle, which the *Tunguſi* call elo: this I ſaw near *Nertchinſki*; however it is not white but grey. Mr. *Steller* ſays, that this is bred upon the river *Hariouſkovoi* which runs into the *Penſchinſka* ſea. The third is the black and white ſpotted eagle. The fourth, the dark clay-coloured eagle, the extremities of whoſe wings and tail are ſpotted: theſe two laſt mentioned abound moſt here. The natives eat the eagles, and eſteem them agreeable food.

Here are likewiſe ſeveral other birds of prey, ſuch as vultures, hawks of various kinds, owls, and above all, ravens, crows, and magpies, which are the ſame with thoſe in *Europe*. Beſides, here are great numbers of cuckoos, water ſparrows, growſe, partridges, thruſhes, larks, ſwallows, and ſeveral other ſmall birds, whoſe appearance in the ſpring the natives expect with great impatience, and thence begin their new year.

In the concluſion of this chapter we have added a liſt of ſome plants, beaſts, fiſhes, and birds, with their names in the *Engliſh*, *Ruſſian*, *Kamtſchatka*, *Koratſki*, and *Kurilſki* languages.

ſledges, and other uſes. The women at this time are buſy with their hemp of nettles, in pulling it up, watering, breaking, peeling, and laying it up in their balagans.

The men in the winter hunt for ſables and foxes, weave fiſhing nets, make ſledges, fetch wood, and bring their proviſions from ſeveral places, which they had prepared in the ſummer, and could not bring home in the harveſt. The women are principally employed in ſpinning thread for nets.

In the ſpring, when the rivers begin to thaw, the fiſh that wintered in them go towards the ſea; and the men are buſied in catching them or the ſea animals that at this time frequent the bays. The people upon the Eaſtern Ocean catch the ſea beaver. All the women go into the fields, where they gather wild garlick, and other young tender herbs, which they uſe not only in a ſcarcity of other proviſion, which often happens at this ſeaſon of the year, but likewiſe out of luxury; for ſo fond are they of every thing that is green, that during the whole ſpring they are ſeldom without having ſome of it in their mouths; and though they always bring home a great bundle of greens, they ſeldom laſt them above a day.

Beſides the above-mentioned employments the men are obliged to build their huts and balagans, to heat their huts, dreſs victuals, feed their dogs, flea the animals, whoſe ſkins are uſed in cloathing, and provide all houſhold and warlike inſtruments: the women are here the only taylors and ſhoemakers, for they dreſs the ſkins, make the cloaths, ſhoes, and ſtockings: it is even a diſgrace for the men to do any thing of that ſort; ſo that they looked upon the *Ruſſians* who came here firſt in a very ridiculous light, when they ſaw them uſe either their needle or awl. The women are likewiſe employed in dying ſkins, in conjuration, and curing of the ſick. Their method of preparing and dying ſkins, ſewing and joining them, is as follows: every ſkin which they uſe

CHAP. VIII.

Of their DIET *and* LIQUORS, *together with their Method of* COOKING.

HAVING already mentioned that the food of the *Kamtſchadales* conſiſts in roots, fiſh, and ſea animals, which are all deſcribed in the ſecond part of this book, we ſhall now relate their method of dreſſing them. And firſt, we will begin with the fiſh, which they uſe inſtead of bread. The principal food, called *yokola*, is prepared from every ſort of fiſh, and ſerves them for houſhold bread. They divide their fiſh into ſix parts; the ſides and tail are hung up to dry; the back and thinner part of the belly are prepared apart, and generally dried over the fire; the head is laid to ſour in pits, and then they eat it like ſalt fiſh, and eſteem it much, though the ſtink is ſuch that a ſtranger cannot bear it; the ribs and the fleſh which remain upon them they hang up and dry, and afterwards pound them for uſe; the larger bones they likewiſe dry for food for their dogs: in this manner all theſe different people prepare the *yokola*, and they eat it for the moſt part dry.

Their ſecond favourite food is caviar, or the roes of fiſh, which they prepare in three different ways: they dry the roe whole in the air, or take it out of the ſkin which envelopes it, and, ſpreading it upon a bed of graſs, dry it before the fire; or laſtly, make rolls of it with the leaves of graſs, which they alſo dry. They never take a journey or go a hunting without dry caviar; and if a *Kamtſchadale* has a pound of this, he can ſubſiſt without any other proviſion a great while; for every birch and alder tree furniſhes him with bark, which, with his

1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

262 dried caviar, makes him an agreeable meal; but they cannot eat either ſeparately, for the caviar ſticks like glue to the teeth, and the bark, although it ſhould be chewed ever ſo long by itſelf, they are hardly ever able to ſwallow down alone. There is ſtill 252 a fourth method which both the *Kamtſchadales* and *Koreki* uſe 171 in preparing their caviar; having covered the bottom of a pit with graſs, they throw the freſh caviar into it, and leave it there to grow ſour: the *Koreki* tie their's in bags and leave it to ſour; this is eſteemed their moſt delicate diſh.

252 There is a third ſort of diet, called by the *Kamtſchadales* 262 *tchupriki*, which is prepared in this manner: in their huts over the fire-place they make a bridge of ſtakes, upon which they lay a heap of fiſh, which remains there 'till the hut becomes as warm as a bagnio; if there was no great thickneſs of fiſh one fire would ſerve to dreſs it; but ſometimes they are obliged to make two, three, or more fires. Fiſh dreſſed in this manner is half roaſted, half ſmoaked, and has a very agreeable taſte, and may be reckoned the beſt of all the *Kamtſchatka* cookery; for the whole juice and fat is prepared with a gradual heat, and kept in by the skin, in which it lies as in a bag, and when ready may be eaſily ſeparated from the fiſh; as ſoon as it is thus dreſſed, they take out the guts, and ſpread the body upon a mat to dry; this they afterwards break ſmall and put into bags, carrying it along with them for proviſion; and when dried eat it like the *yokola*.

252 The *Kamtſchadales* have a diſh, which they eſteem very 262 much, called *huigul:* it is fiſh laid to grow ſour in pits; and 171 though the ſmell of it is intollerable, yet the *Kamtſchadales* eſteem it a perfume. This fiſh ſometimes rots ſo much in the pits that they cannot take it out without ladles; however in that caſe they uſe it for feeding their dogs.

Mr. *Steller* ſays, that the ſummer *Samojeds* likewiſe ſour their fiſh; but that the earth being frozen preſerves it much better;

1: Krasheninnikov N-5 (1736-40) 1764 Kamchadal

better; the *Jakutſki* alſo dig deep pits, in which they lay their fiſh, ſprinkling it with wood aſhes, and cover it with leaves at top, and over all put a layer of earth: this method is better than any of the former. The *Tunguſi* and Coſſacks of *Ochotſka* preſerve their fiſh in the ſame manner, with this difference only, that inſtead of wood aſhes, they uſe the aſhes of burnt ſea weed. They boil their freſh fiſh in troughs, take it out with boards, and letting it cool, eat it with a ſoup made of the ſweet graſs.

As for the fleſh of land and ſea animals, they boil it in their troughs, with ſeveral different herbs and roots; the broth they drink out of ladles and bowls, and the meat they take out upon boards, and eat in their hands. The whale and ſea horſe fat they alſo boil with roots.

There is a principal diſh at all their feaſts and entertainments, called *ſelaga*, which they make by pounding all ſorts of different roots and berries, with the addition of caviar, and whale and ſeals' fat.

Before the conqueſt they ſeldom uſed any thing for drink but water: but when they made merry they drank water which had ſtood ſome time upon muſhroons; but of this hereafter. At preſent they drink ſpirits as faſt as the *Ruſſians*: after dinner they drink water; and every one, when he goes to bed at night, ſets a veſſel of water by him, to which he puts ſnow or ice to keep it cold; and always drinks it up before morning. In the winter time they amuſe themſelves frequently by throwing handfuls of ſnow into their mouths; and the bridegrooms who work with the fathers of their future brides find it their hardeſt task to provide ſnow for their family in the ſummer time, for they muſt bring it from the higheſt hills be the weather what it will, otherwiſe they would ſo diſoblige as never to be forgiven.

5: Jochelson A-5 (1910-11) 1928 Kamchadal

172 Of the above localities, Numbers 1 to 12 yielded the following sites:

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SITE 1

On a hill above Salt Lake there were several pits, which could not be noticed at first sight as they were covered with an abundant overgrowth of the shelamainik (*Filipendula kamtschatica* MAX.) and horse-tails (*Equisetum heleocharis* EHRH.) 6 feet high. The staple food of the old Kamchadal fishers consisted of different salmon species, the bones of which in decaying formed an excellent fertiliser for the soil. In my work on the Aleutian archæology I pointed out that no bones of salmon were found in excavations of ancient village sites on the Aleutian Islands, contrary to the statements of Dr. Dall for the Aleutian Islands and Professor Emile Rivière, cited by Professor MacCurdy, concerning finds in a cave near

1. Salt Lake.
2. Bogatyrevskaya Bay.
3. Isthmus above the Salt Lake.
4. Slope of hill on the northeastern side of Bogatyrevskaya Bay.

2

Menton, France.[1] In his *Human Origin*, Professor MacCurdy[2] cites Mr. Abbo as having found on a skeleton excavated in Verneau, France, perforated salmon vertebræ, evidently worn as ornaments. It would be interesting to determine whether the vertebræ were really of salmon, and not of some other species of fish. As I have stated, the soft bones of *Salmonoidea*, which ascend rivers and fresh-water lakes for spawning, decay rapidly, falling to pieces in 2 or 3 years.

Professor R. Torii[3] referring to remains of food found in his archæological excavations in Manchuria tells of fish bones, the species of which could not be determined because they were only a heap of powder. These were undoubtedly salmon bones.

[1] Waldemar Jochelson, *Archæological Investigations in Aleutian Islands*, p. 138; W. H. Dall, *On Succession in the Shell Heaps of the Aleutian Islands*, Contributions to North American Ethnology, vol. 1, Washington, 1877, pp. 41-91; G. G. MacCurdy, *The Field of Paleolithic Art*, American Anthropologist, vol. 26, No. 1, Jan.–Mar., 1924, p. 41.

[2] George Grant MacCurdy, *Human Origins*, vol. 1, p. 362.

[3] R. Torii, *Populations Préhistoriques de la Mandchourie Méridionale*, Jour. College of Science, Tokyo Imperial University, 1913-1915, vol. XXXVI, Art. 8, p. 48.

7:Lesseps T-3 (1787-88)1790 Kamchadal

177 or of ſkin without hair; they are made like
291 the parque, and anſwer the ſame purpoſe,
563 that is, to be worn over their other garments. Their gala dreſs, is a parque trimmed with otter ſkins and velvet, or other ſtuffs and furs equally dear. The women are clothed like the Ruſſian women, whoſe mode of dreſs is too well known to need a deſcription; I ſhall therefore only obſerve, that the exceſſive ſcarcity of every ſpecies of ſtuff at Kamtſchatka, renders the toilet of the women an object of very conſiderable expence: they ſometimes adopt the dreſs of the men.

262 The principal food of theſe people con-
462 ſiſts, as I have already obſerved, in dried
222 fiſh. The fiſh are procured by the men, while the women are employed in domeſtic occupations, or in gathering fruits and other vegetables, which, next to the dried fiſh, are the favourite proviſions of the Kamtſchadales

7:Lesseps T-3 (1787-88)1790 Kamchadal

262 ſchadales and Ruſſians of this country.
222 When the women go out to make theſe har-
462 veſts for winter conſumption, it is high holy-
527 day with them, and the anniverſary is cele-
brated by a riotous and intemperate joy, that frequently gives riſe to the moſt extravagant and indecent ſcenes. They diſperſe in crouds through the country, ſinging and giving themſelves up to all the abſurdities which their imagination ſuggeſts; no conſideration of fear or modeſty reſtrains them. I cannot better deſcribe their licentious frenzy than by comparing it with the bacchanals of the Pagans. Ill betide the man whom chance conducts and delivers into their hands! however reſolute or however active he may be, it is impoſſible to evade the fate that awaits him; and it is ſeldom that he eſcapes, without receiving a ſevere flagellation.

Their proviſions are prepared nearly in the

7:Lesseps T-3 (1787-88)1790 Kamchadal

THEIR PROVISIONS ARE PREPARED NEARLY IN
252 the following manner; it will appear, from
262 the recital, that they cannot be accuſed of much delicacy. They are particularly careful to waſte no part of the fiſh. As ſoon as it is caught they tear out the gills, which they immediately ſuck with extreme gratification. By another refinement of ſenſuality or gluttony, they cut off alſo at the ſame time ſome ſlices of the fiſh, which they devour with equal avidity, covered as they are with clots of blood. The fiſh is then gutted, and the entrails reſerved for their dogs. The reſt is prepared and dried; when they eat it either boiled, roaſted, or broiled, but moſt commonly raw.

The food which the epicures eſteem moſt, and which appeared to me to be ſingularly diſguſting, is a ſpecies of ſalmon, called *tchaouitcha*. As ſoon as it is caught, they bury it in a hole; and in this kind of larder they leave it till it has had time to ſour, or, properly

7:Lesseps T-3 (1787-88)1790 Kamchadal

252 properly ſpeaking, become perfectly pu-
262 trified. It is only in this ſtate of corruption that it attains the flavour moſt pleaſing to the delicate palates of theſe people. In my opinion the infectious odour that exhales from this fiſh, would ſuffice to repulſe the moſt hungry being; and yet a Kamtſchadale feeds voluptuouſly upon this rotten fleſh. How fortunate does he conſider himſelf when the head falls to his lot! this is deemed the moſt delicious morſel, and is commonly diſtributed into many parts. I frequently wiſhed to overcome my averſion, and taſte this ſo highly valued food; but my reſolution was unequal to it; and I was not only unable to taſte it, but even to bring it near my mouth; every time I attempted, the fetid exhalation which it emitted gave me a nauſea, and diſguſted me inſuperably.

262 The moſt common fiſh in Kamtſchatka
372 are trouts, and ſalmon of different ſpecies;

ſea

7:Lesseps T-3 (1787-88)1790 Kamchadal

262 sea wolves are alſo eaten; the fat of this fiſh
372 is very wholeſome, and ſerves them beſide for lamp oil.

136 Among the vegetables which are made
252 uſe of by the Kamtſchadales, the principal
262 are *ſarana* root, wild garlic, *ſlatkaïa-trava*, or ſweet herb, and other plants and fruits nearly ſimilar to what are found in Ruſſia.

The *ſarana* is known to botaniſts*. Its ſhape, its ſize, and its colour have been deſcribed at large in the third voyage of captain Cook. Its farinaceous root ſerves inſtead of bread†. It is dried before it is

* By the name of *lilium flore atro rubente.*

† The Coſſacs uſe rye alſo, which makes a ſort of black bread, like that of the Ruſſian peaſants. Government allows them a certain quantity of rye flour, but it is inſufficient, and they are obliged to procure more at their own expence. Some of them lay it up in ſtore in order to profit by its future ſale.

uſed;

7:Lesseps T-3 (1787-88)1790 Kamchadal

136 uſed; but it is wholeſome and nouriſhing
252 in whatever mode it may be prepared.
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From the wild garlic* they make a harſh and fermented beverage, which has a very unpleaſant taſte; it is alſo uſed in various ſauces; the Kamtſchadales are very fond of it.

The ſlatkaïa-trava, or ſweet herb, is pleaſant enough when it is freſh. This plant† has alſo been minutely deſcribed by the Engliſh. It is highly eſteemed by the natives, particularly the ſpirit diſtilled from it. Soon after it is gathered, they ſlit it in two, and ſcrape out the pith with a muſcle-ſhell: they then dry it for winter, and

* It is called in Kamtſchatka, *tſcheremſcha*. Gmelin denominates it: *allium foliis radicalibus petiolatis, floribus umbellatis*. Vol. 1. p. 49.

† *Spondilium foliolis pinnatifidis*. See Linn. The juice of the rind of this plant is ſo acrid, that it is impoſſible to touch it without bliſtering the hand. In gathering it they take care to wear gloves.

when

7:Lesseps T-3 (1787-88)1790 Kamchadal

224 foxes, otters, beavers, ſables, hares*, &c.
261 but they have not the ſame dangers to encounter; ſometimes they make uſe of ſnares, conſtructed of wood or iron, leſs than thoſe which are ſet for bears, and reſembling in their ſimplicity our pitfalls; no other attention is neceſſary than that of viſiting them from time to time. The Kamtſchadales ſometimes lie in ambuſh, armed in the manner I have deſcribed; and the only hardſhip they experience reſults from their proviſion being exhauſted in conſequence of the long duration of their chace. They frequently ſubmit to ſuffer hunger for many days together, rather than quit their ſtations till they have obtained the end of their purſuit; but they amply repay themſelves for this faſting, by immediately devouring the fleſh of the animals †, and by the plea-

* Theſe animals are all deſcribed in Cook's voyage.

262 † The fleſh of bears, argali, and rain-deer, is conſidered by them as very wholeſome, the laſt particularly; I frequently feaſted upon it.

ſure

18: Yarmolinsky--7 L-4 (no date) 1947 Kamchadal
252, 262

" A native dish regarded as a dainty, which is made by pounding fat with several ingredients, including berries and the roots of sarana [Polygonum viviparum]. 'The tolkusha prepared with reindeer fat tastes well,' writes Jochelson in one of the unpublished studies mentioned above, 'but one cannot say the same of tolkusha with seal's fat.'"

22: Guillemard T-2 (1882) 1886 Kamchadal

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had visited the greater part of the peninsula. Owing to the difficulties of communication excepting in the winter season, he had abundant time on his hands, which he had devoted with indefatigable ardour to his favourite pursuits. Geology, surveying, palæontology, photography and ornithology,—each and all had occupied his leisure hours, with results which were evidenced by the richness of his collections. None of the other Europeans knew anything of the country outside Petropaulovsky, and to him alone we were indebted for what information we could get about our projected route, as well as for many useful hints on Kamschatkan travel.

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Our intention was, if the plan were feasible, to travel northwards from Avatcha Bay until we struck the head waters of the Great Kamschatka River, where we were to procure canoes if possible, or if not to construct rafts, and by this means float down the stream to the sea. Meanwhile, the yacht was to remain in Petropaulovsky harbour for a month or six weeks, and then proceed to the mouth of the river to await our arrival. We found that Dr. Dybowski, in spite of his extensive travels in the peninsula, had not himself performed this journey, neither was he aware of any other person who had attempted it. Communication often takes place with Nischni Kamschatka—an *ostrog* near the mouth of the river—in the winter, but the sledges do not, as in Lapland, travel on the river; and though occasionally a few of the lonely settlements upon its banks are passed, the track leads for the most part by short cuts overland, and we had no means of judging the

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distances or the length of time necessary for our journey. From Dr. Dybowski, however, we were able to obtain all the information that was to be got upon the subject; and to learn that, whatever other difficulties we might have to encounter, that of an insufficient supply of food was certainly not one. His accounts of the really marvellous abundance of fish, which at the time seemed almost incredible, we were destined later to find, if anything, understated. Whether the almost exclusive fish diet of the inhabitants of the

22: Guillemard T-2 (1882) 1886 Kamchadal

262 country has any connection or not with the leprosy prevalent
164 among them, it is difficult to say. Our informant described it as
137 being a common disease, and he must have had considerable
241 opportunities of judging, but it is remarkable that during our journey through the country we met with but one solitary case. Scurvy was, we were told, uncommon, owing no doubt to the abundance of the wild garlic and the *sarana*—a liliaceous plant whose bulb is stored for the winter, and supplies the place of the potato. This latter vegetable has, however, become much more extensively cultivated of late years.

115 It was a matter of great regret to us that our acquaintance
758 with Dr. Dybowski should of necessity have been so limited. He
R was on the eve of a long journey in search of fossils to the Kuril
177 Lake, which lies in an almost unknown region at the southern
.75 extremity of the peninsula. It was by such pursuits alone that he was able to mitigate the loneliness of what was, in reality, an exile. During the winter he travelled over the country to such isolated spots of it as are inhabited, and saw his patients. These he was supposed to supply with such medicine as would suffice for their cure, or last them, should they be incurables, until the time of his visit in the following year! It is not every parish doctor whose district is spread over the extent of one hundred thousand square miles!

During the week that was necessary for the completion of our preparations we had abundant time for the exploration of Petropaulovsky and its surroundings. The numerous harbours and lovely scenery of Avatcha Bay would take a month to become thoroughly acquainted with, and it would be hard to imagine a more charming place for the naturalist and sportsman. Possibly, when the salmon rivers of Norway have reached a prohibitory price, and the game of India and South Africa has disappeared, some adventurous individual will recommend Kamschatka as a new field for sportsmen. At present, it must be confessed, it is not very easy to get there. Every year the port is visited by a

22: Guillemard T-2 (1882) 1886 Kamchadal

000 among them was no trace of Cook. Presently we came upon that imperturbable gentleman, placidly smoking a cigarette. He explained the matter in a few words:—"Very sorry, sir, but" (indicating the horse) "I've never been shipmates along o' one of them things before!"

133 136 501 We crossed the river in two dug-out canoes lashed together. These boats are as a rule small, and without attempt at elegance in shape, such as one sees in Borneo and other parts of the Malay Archipelago. Where the rivers are shallow, long poles are used to propel them, and indeed the natives always seem to prefer this implement to the paddle, wherever its use is possible. The Avatcha River is here about eighty yards in breadth; shallow for the most part, but with a centre channel about seven feet deep. It appeared 226 to be teeming with salmon. Stari-ostrog, situated on the right 251 bank, consists of ten huts and a large number of fish-drying sheds. 262 The long Kamschatkan winters, during which it is difficult to 361 procure food of any kind, and the consequent necessity of fish as an article of diet for almost every living creature in the settlements —the cows and horses even not excepted—create a need for a very large number of these buildings; and the consequence is that, to the eye of the new-comer, the villages appear very greatly larger than they really are. Scanty as the population of this wild country is, the amount of salmon annually consumed is absolutely enormous. At this little village, for instance, we were told that, during the season, 20,000 fish would be no uncommon catch for a single day! Here, however, owing to there being no other settlements higher up the river, they are permitted to stake the stream right across from bank to bank, and the number of fish thus obtained may probably be in excess of that in other places. The labour expended in gathering so abundant a harvest is, of course, very considerable, and during the season the inhabitants work day and night to get in a sufficient supply for the winter.

563 We were greeted by the headman and brought to his house, where we were regaled with milk, sour cream, coarse rye bread,

[Avacha--Analyst]

22: Guillemard T-2 (1882) 1886 Kamchadal

000 sewn together. They admitted enough light, however, to show us the strange mixture of ornament that hung upon the walls. In the corner was the usual tawdry *eikon*, and facing it, a long array of clippings from the "New York Police News," full of the choicest
262 horrors of battle, murder, and sudden death! Amid these lively
136 surroundings we consumed our sour milk and bilberries, and
224 bargained for some potatoes and turnips, which appeared to be
241 grown here in some abundance. Much, no doubt, might be done in the way of agriculture in many parts of the country were it not that the fish-harvest and hunting take up so much of the peasants' time. Of their success in the latter line we had evidence in a fine pair of horns of the Argali or Bighorn,[1] which lay outside the hut, and had only recently been shot. These animals, we were told, are not easily obtained at this season, and do not exist in any great numbers in the neighbourhood; but in the winter they descend to the lower spurs of the mountains, and are more easily brought to
000 bag. We much desired to obtain a head and skeleton of this sheep, but our limited time, and Afanasi's statement that we should be able to get them on the sea-coast about sixty miles to the eastward of Avatcha Bay, eventually decided us on relinquishing the idea of hunting them in this neighbourhood. We were pleased, however, to be able to prove their existence in the interior, which has by some previous writers been doubted.

We pursued our journey in a steady downpour of rain, our track leading through coarse grass and other annual vegetation so thick that from the back of a horse it was utterly impossible to see any trace whatever of the way. Our two hunters had donned their waterproofs,—long coats made from the intestine of the seal, carefully sewn together with sinew. These garments are tolerably strong in a thornless country, and though not ornamental, are as light as a feather, and most effectual in keeping out rain. We
133 passed to the south of some hot springs, about two versts distant from
515 the village, the water of which was said to be of such a temperature

[1] *Ovis nivicola*, Eschscholtz.

[i.e. Narchiki--analyst]

22: Guillemard T-2 (1882) 1886 Kamchadal

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of them were clothed in leather breeches and the boots I have already described, with the ordinary loose blue shirt of the Russian peasant, but some had already commenced to wear the *parka*. These are not all of reindeer, which is not a common animal except among the Koriaks, but are also made of bear and dog fur, although the dogs are not grown for the purpose, as is the case in Lapland.

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If leprosy be in any way connected with a diet in which fish is one of the chief constituents, as is by some supposed to be the case, in no country in the world should it be more prevalent than in Kamschatka. Dr. Dybowski had assured me that it was very common, and had shown me photographs in which the expression of the disorder appeared identical with that unfortunately so frequent in Norway. But the only case which came under our notice was at this place, and since the sufferers do not appear to be secluded in any way, it is only fair to conclude that, in the interior of the country at least, the disease cannot be very prevalent. Syphilis is, unhappily, very general, but its effects are now far less terrible than on its first introduction.

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We paddled merrily down stream in spite of the still unsettled arguments as to the price we were to pay our men. Below Mashura the pines become more numerous, and the perpendicular mud cliffs are a characteristic feature of the river. Beneath these we found the depth of the stream to be often as much as eighteen or twenty feet, but the mean depth is probably not more than half as great. Huge piles of driftwood block the banks of every low promontory, and testify to the enormous force and volume of the stream upon the breaking up of the ice,—a phenomenon which can dimly be realised from the wonderfully graphic description of Mr. Seebohm in his "Siberia in Asia." Owing to the increased depth of the water, snags became less frequent and navigation easier; but the size of our rafts prevented us from making more than five versts an hour, a rate that our log, frequently heaved and with corrections applied for the current, told us to be fairly constant.

Hitherto we had been able with the greatest ease to shoot as

22: Guillemard T-2 (1882) 1886 Kamchadal

136 eastern form of the Pied Wagtail (Kittlitz's *Motacilla lugens*) was extremely numerous; the Yellow Wagtail much less so. But of all the land birds the Kamschatkan Marsh Tit (*P. kamschatkensis*) was at this part of the river by far the most abundant. For two or three days we saw them in flocks of from fifty to a couple of hundred individuals, streaming northward along the bank from tree to tree.

133 Shortly after mid-day we passed the mouth of a river joining the Kamschatka on the right bank. The natives knew it as the Kojerevska. It is a stream of some size, being apparently of considerable depth, and having a breadth of forty yards at its junction with the main stream. As far as we could gather, it drains the opposing slopes of the Tolbatchinska and Kojerevska volcanoes.

We reached the little hamlet of Kojerevsky at nightfall. The distance from Tolbatchik, the scene of the last rows we had had with the natives, is only ninety-one versts instead of two hundred, and we might with perfect justice have reduced our payment to half of the sum we had promised. But, to tell the truth, we had become so wearied of the endless wranglings in which we had been involved in all our dealings with these wretched people that we paid them without a word. It was better to let them think that they had deceived us than for them to imagine that we had weakly yielded to what we knew to be an imposition. We were 262/144 pleased to find that the Kojerevskans exhibited strong evidences of their Kamschatdale descent. We were received by the head-man, a little brown fellow with bright eyes; and under his direction the people did everything in their power to help us, carrying up our baggage, bringing us wood, and altogether showing us an amount of civility that was as new to us as it was agreeable. They provided us with wild cherries, cranberries, potatoes, turnips, milk, cream, and butter, and last, but by no means least, with a loaf of coarse rye bread, which, we heard, had been specially prepared for the Kluchi pope, who had been expected to pay the settlement a visit.

22: Guillemard T-2 (1882) 1886 Kamchadal

136 Since leaving Kluchi we had spent a good deal of time in trying to obtain a specimen of Pallas's Northern Sea Eagle (*Thalassaëtus pelagicus*)—a species which, at this part of the river, is by no means uncommon. It is a magnificent bird, and is especially conspicuous from the large white shoulder-patches and tail, but owing to its shyness it is extremely difficult to approach. We were, unfortunately, not provided with a rook rifle, and the few long shots we obtained were unsuccessful. Once only did we get a bird fairly within shot, and the two barrels of No. 2 that he received at a distance of thirty yards seemed to have no effect whatever upon him. This eagle appears to be chiefly confined to the lower part of the Kamschatka River, for we did not meet with it before reaching the neighbourhood of the great volcanoes.

226 252 262 The natives are prevented by law from barring the river in the lower part of its course, and here the salmon are taken chiefly with seine and drift nets. The V-shaped curral-trap of stakes, with baskets on the lobster-pot principle, is also frequently seen; a system which, as I have already stated, is used to bar the river right across at Melcova. The fat of the Kisuchi salmon is regarded as a great delicacy, and is prepared in considerable quantities at this season. A canoe is filled with water, and a number of the fish placed in it. Into this large red-hot stones are dropped, thus boiling the contents, which are meanwhile constantly stirred. The fat is then removed as it rises to the surface.

133 224 The low and muddy shores of the river in this part of its course are in many places intersected with small creeks, at the mouths of which two tall poles may often be noticed. These are used for taking ducks at flight time, by a plan which is not uncommon in other parts of the world. A fine net is hung between the two poles, which the hunter lets fall as the birds fly against it. By this means we were told that large numbers are often caught.

000 We woke on the morning of September 15th to a most miser-

24: Lansdell-639 M-2 (1879) 1882 Kamchadal
116, 157, 262, 574, 576

" The Kamchatdales are a people of much amiability and honesty. Their houses are always open to the stranger, whom they never weary of waiting upon, and from whom they soon forget an injury. (1)

1. Their hospitality is carried even to excess. They visit one another, for instance, during a month or six weeks, until the generous host, finding his stock exhausted, gives the hint by serving up a dish called 'tolkootha', a hodge-podge, composed of meat, fish, and vegetables; upon which the guests depart the following day."

24: Lansdell-645-646 M-2 (1879) 1882 Kamchadal
116, 137, 177, 226, 241, 262

" In certain valleys, especially in those of Kamchatka, the grass exceeds the height of a man, and the Russian settlers make hay three times a year. The culture of cereals is of little profit; oats thrive best. Hemp has been grown, but not in sufficient quantities to replace the nettle as a textile thread. In fact, gardening has succeeded better than agriculture, and now the natives cultivate in hundreds of gardens cabbages, potatoes, beetroot, turnips, carrots, and other vegetables introduced by the Russians in the last century. All these, however, added to their other kinds of food, barely give sustenance enough to the Kamchatdales and their dogs, without which it would be almost impossible for them to leave their huts at certain times of the year. During the four months of summer they must lay up dry fish to provide for eight months of winter, and the normal amount of winter food for a pack of half-a-dozen Kamchatdale dogs is 100,000 herrings. Besides [646] this the owner's family must be nourished, and hence, if a bad season comes, and the fishing or hunting fails, death is certain; for to the greater part of the natives who have no deer, winter and want are synonymous terms."

28: Sarytschew--66-67 T-1 (1789-90) 1806 Kamchadal
116, 222, 262, 609, 825

"On our journey we experienced the most friendly treatment from the Kamtschadales, who not only entertained us with the utmost cordiality, but made us liberal presents of partridges, fresh fish, frozen keta, jukol, berries, and roots, [67] which are collected in great quantities from the mouse-holes, and form one of their principal aliments.

In autumn, they go into the fields in search of these roots, and as soon as they find hollow ground, by stamping, they dig down, and lay open the store-rooms of these animals. They do not, however, empty them entirely, but leave the mice a third at least of their provision, probably with a view of not driving away such useful creatures. They terrify each other, indeed, with the saying, that the mouse which is deprived of all its sustenance, will hang itself in despair on the next tree; a tale which may perhaps have originated in the circumstance of a mouse having been entangled by accident in the branches of a tree, and having hung there till it died."

133 plane, very subject to storms and heavy falls of
132 snow. I reached the place at nine in the evening.
The inhabitants, amounting to thirty-two, live in
161 four yourtes, and are all afflicted with the disease
164 so common to the peninsula; and the contagion, and
262 want of medicine have been so great, that even the
361 children are equally afflicted, and the complaint of scrofula is become hereditary. In this part of the peninsula the chase is scarce, and the inhabitants mostly subsist upon fish, a few mountain sheep, and wild rein-deer, being the only meat they taste from one end of the year to the other. The situation is fine and highly productive in fish, but at this moment there are not a sufficiency of people to transact the ordinary business; a circumstance which calls aloud for the compassion of the chief.

133 From Ganal to Malka are thirty miles, the first
361 ten of which are over a sterile mountainous country, which is more than compensated by the succeeding richness of a valley eighteen miles in length. I crossed several times the Bistra, a rapid stream, uniting with the Bolshaya Reka, and was again obliged to become pilot, chief, and dog-master; however, I managed very well, and arrived early. Malka is deserving of little notice, yet is said to be celebrated for its baths! The situation is magnificently grand; the hospital stands in the bosom of a lofty chain of elevated mountains at two miles from the village. I was welcomed by two old acquaintances, both of whom

[of Ganal village--Analyst]

29:Cochrane T-2 (1821-22) 1824 Kamchadal

251 the sterility of the soil, operate also to prevent
263 the inhabitants from laying in a sufficient store of
439 winter provisions, which as they consist of fish are exposed to the air to dry, and in a short time become so rotten and maggotty, that but a small quantity can be made serviceable for the consumption of the people; the rest is retained for the dogs. Salt is at present issued, but not in sufficient quantities; were that article more liberally distributed, the people might in some years prepare fish to last them several successive ones. From the quantity now supplied by the king of the Sandwich islands, it is to be hoped that the first productive season will be taken advantage of.

137 Of wild vegetables, some of which are mixed
262 with the bark of trees for the fare of the inhabit-
439 ants, there is an abundance in Kamtchatka, and there is no doubt that greens, turnips, and radishes might with a little trouble be every where produced. Wild berries and wild garlick abound; the latter is exported to Okotsk and Yakutsk: this plant is one of the finest antiscorbutics known, but has a peculiarly offensive smell.

136 The principal riches of Kamtchatka may be said to consist in the animals of the chase, of which there are so prodigious a number, that there are not sufficient inhabitants to take them. The most valuable are foxes of various colours, a few sea and more river otters, with an immense number of sables. Bears, wolves, rein-deer and mountain-

29:Cochrane T-2 (1821-22) 1824 Kamchadal

136 sheep, and sometimes a few lynxes, are also to be
438 found. The number of skins annually exported
439 and consumed in the peninsula is about thirty thousand, of which sables and foxes form the principal part. The sables are considered at once the warmest and the coarsest known; the foxes however, especially the fiery red, are of the finest spe-
231 cies. Next to these furs, the dogs of Kamtchatka may be considered as forming a great part of their riches. These faithful and useful animals, are employed to transport fish, supply the house with water, the cattle with hay,—in short to do all the work that horses perform in England. They are fed as circumstances may dictate, being always left to shift for themselves from June to October. They are of a coarse appearance, in shape resembling a common house-dog, but endued with great sagacity, and it is to be regretted that they are not relieved a little by the importation of horses.

136 Independent of fish and wild animals, the Kamtchatdales derive also a considerable benefit from the surprising quantities of geese, ducks, swans,
251 snipes, and wild cocks. They are preserved by
262 dipping them in water, which freezing, they will be good as long as winter continues; at other times they are salted. The ducks and snipes are most excellent; but the geese, swans, and wild sheep are considered venison, and of the most delicious kind too, by those who are termed epicures; for myself although I have frequently partaken of them,

29:Cochrane T-2 (1821-22) 824 Kamchadal

251 I never could relish their flesh. The Kamtchatdales
262 also derive great benefit from the whales which are
825 numerous, and which being encountered by the Kasatka, for the sake of the tongue, as is supposed, are killed and cast ashore. Upon the whole, therefore, there are no people at whose disposition Providence has placed more of the necessaries of life, than the inhabitants of Kamtchatka. For their direct subsistence, they have fish, flesh, and fowl, wild berries and roots in great variety and abundance, sufficient doubtless to maintain a large population; while for clothing, they have immense quantities of furs of the warmest and most durable kind;
137 and for firing and building, wood is every where to be had in the utmost profusion.

181 Such being the case, it becomes a matter of spe-
433 culation, what could induce the aborigines to live in that filthy and famished condition which formerly characterized them. Was it from an over abundant population, or the want of means to possess themselves of food—such as guns, nets and traps? That they had means to entrap game and fish for a certain proportion of the inhabitants there can be no doubt, but whether sufficient for a large population is very questionable.

157 Of the people in general, I can only say they are
177 as amiable and honest as ever. They are now esta-
221 blished in villages all built in the old Russian style, which are clean and comfortable. During the summer or fishing season, they leave their winter resi-

29:Cochrane T-2 (1821-22)1824 Kamchadal

posed to have fallen victims to it within a short period. Yet at this moment there is a want of vaccinating matter, nor is it a questionable assertion that the quality of medicines in the hospitals is shamefully adulterated, and the quantity small. The present worthy chief has however caused an inquiry to be made upon this subject, and the result has been transmitted to government. But it is not the small pox alone, that the arrival of the Russians introduced into this place; the distemper before alluded to has made, and continues to make, most dreadful ravages in every part of the peninsula, very few families being free from the taint, and no part of the world can show more miserable objects of its fury. The whole race indeed look like beings better qualified to extinguish than propagate the human species; nor is this surprising, considering their present state, almost without hospitals, medicines, or attendants, save that ill-managed house at Malka.

Besides these two diseases, the inhabitants of Kamtchatka are subject to all those which make havoc in countries where the people are ordinarily ill fed, ill clothed, and liable to famine. The last has frequently visited this Peninsula, more from a want of people than of food; for fish is not always to be had upon both sides of the Peninsula at the same time, and they have not the means of transporting the superabundant quantity to the opposite coast.